NAME OF THE COURSE	ECONOMICS OF INSURANCE					
Code	EUBD25	Year of study	1st			
Course teacher	Marijana Ćurak, Full Profesor; Dujam Kovač, Assistant Professor	Credits (ECTS)	5			
Associate teachers	Dujam Kovač, Assistant Professor	Type of instruction (number of hours)	L	S	E	F
			26		26	
Status of the course	Compulsory	Percentage of application of e-learning	30%			

COURSE DESCRIPTION

Course objectives	Provide knowledge that will enable critical judgment of production and functional aspects of insurance companies and insurance markets, actuarial calculations and assessment of regulation of insurance companies.
Course enrolment requirements and entry competences required for the course	Requirements for the course enrolment are regulated by the Statute of the Faculty of Economics, Business and Tourism and by the Rulebook of study programs and studying system.
Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	Course learning outcome: Critically evaluate product and functional aspects of insurance companies and insurance markets, determine the appropriate actuarial calculations and evaluate the regulatory aspects of the insurance companies' operations. Particular learning outcomes: 1. Identify the determinants of insurance supply and demand and assess the characteristics of the insurance market structure. 2. Evaluate the product aspects of insurance companies. 3. Analyse the functional aspects of insurance companies. 4. Calculate the insurance premium based on actuarial calculations. 5. Argue the existence of regulation and evaluate the legal and regulatory aspects of the insurance companies' operations.

Course content broken down in detail by weekly class schedule (syllabus)

Lectures		Exercises	
Topics	Hours	Topics	Hours
The demand for insurance: risks, decision-making in situation of uncertainty, concept of utility, behavioural economics.	3	Task examples - making decision on buying insurance. Assignments involving software tools for quantitative data analysis.	3
Insurance supply: pooling model and diversification. Organizations of insurance.	2	Determinants of demand for life and non-life insurance. Task examples related risk pooling and diversification. Assignments involving software tools for quantitative data analysis.	2

	Life insurance: life assurance and annuity insurance.	2	Case studies - life insurance. Single net premiums. Seminar paper presentation. Assignments involving software tools for quantitative data analysis.	2
	Non-life insurance.	2	Case studies – non-life insurance. Annual net premiums. Gross premium. Seminar paper presentation. Assignments involving software tools for quantitative data analysis.	2
	Insurance contract. Contract principles.	2	Examples of franchise clause, underinsurance clause, first loss clause and coinsurance clause. Seminar paper presentation. Assignments involving software tools for quantitative data analysis.	2
	Insurance intermediation.	2	Insurance agents and brokers. Field work	2
	Risk underwriting and premiums ratings. Insurance companies' operating expenses.	2	Determining performances of risk underwriting. Seminar paper presentation. Assignments involving software tools for quantitative data analysis.	2
	Sources of funds for insurer: equity and reserves.	1	Determining mathematical reserve. Determining unearned premium reserve and equalization reserve. Seminar paper presentation. Assignments involving software tools for quantitative data analysis.	1

	Management of underwriting risk: coinsurance, reinsurance, alternative risk transfer.	2	Examples of proportional and non-proportional reinsurance. Seminar paper presentation. Assignments involving software tools for quantitative data analysis.	2
	Investments of insurance companies.	2	Bond immunization. Selection of the optimal portfolio. Seminar paper presentation. Assignments involving software tools for quantitative data analysis.	2
	Claim settlement: indemnity, organization and phases in the process of claim settlement.	2	Case studies – claim settlement. Seminar paper presentation. Assignments involving software tools for quantitative data analysis.	2
	Regulation of insurance: imperfections of the market and the reasons for regulation, fields of regulation.	2	Solvency regulation. Seminar paper presentation.	2
	InsurTech / the digital transformation of insurance.	2	InsurTech / the digital transformation of insurance.	2

Format of instruction	☑ **lectures** ☑ **seminars and workshops** ☑ **exercises** ☐ *on line* in entirety ☑ partial e-learning ☑ **field work**	☑ independent assignments (assignments involving software tools for quantitative data analysis) ☐ multimedia ☐ laboratory ☐ work with mentor ☑ **case study** ☐ visiting lecture
Student responsibilities	The requirements to get the right to take the final exam: regular attendance (for full-time students: minimum 60% of lectures and 60% of exercises; for part-time students: half of the requirements defined for full-time students), successfully written and presented seminar paper and completion of at least 50% of the assignments involving the use of software tools (a total of 4 weeks are allocated for the evaluation of these assignments).	

Screening student work *(name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)*						
	Class attendance	0,75	Research		Practical training	0,5
	Experimental work		Report		Self-assessment test	
	Essay		Seminar paper	0,25	Case study	
	Mid-term exams	3,5*	Oral exam		(Other)	
	Written exam	3,5 *	Project		(Other)	

Grading and evaluating student work in class and at the final exam

The final grade in the course is based on a total of 120 points, earned through the following components:

Grade component	Number of points by segment
Midterm exams / final written exam	100
Computer-based tasks (software tools)	10
Seminar paper (preparation and presentation)	5
Class contribution	5

During the semester, **two midterm** exams will be organized in the form of written exam, carrying a **maximum of 100 points**. *All students enrolled in the course can take the first midterm exam*. A passing grade on the first midterm exam is a prerequisite for taking the second midterm exam. Alternatively, students may take a written **final exam** during the examination period, which also carries a **maximum of 100 points**.

Written exams consist of **10 questions**, 5 of which cover theoretical topics and 5 quantitative problems. Each correct answer to a **theoretical question** is worth **12 points**, while each correct answer to a **quantitative problem** is worth **8 points**. **To pass a written exam, a student must earn at least 33 points on the theoretical part and 22 points on the quantitative part.**

Assignments involving software tools for quantitative data analysis are a mandatory component of assessment, carried out over 4 weeks of exercises, and contribute a **maximum of 10 points**.

The seminar paper is mandatory for all students and carries a **maximum of 5 points**, while **class contribution** is evaluated with up to **5 points**.

Points	Relative score thresholds	Grade
0 - 65	≤ 54 %	insufficient (1)
66 - 80	55 % - 67 %	sufficient (2)
81 - 95	68 % - 79 %	good (3)
96 - 107	80 % - 89 %	very good (4)
108 - 120	≥ 90 %	excellent (5)

Students who achieve passing grades on both midterm exams are not required to take the final written exam.

For students who are not required to attend classes, the final grade is determined by the total points achieved in the midterm exams or the final written exam. These students must achieve the minimum number of points required to pass under the same conditions as students who are required to attend classes (55 points). For the awarding of higher positive grades, relative thresholds are applied as shown in the table.

* A student who has achieved a minimum of 55 points in each mid-term exam has completed the course and, thus, is not required to take the final written exam.

Required literature (available in the library and via other media)	Title	Number of copies in the library	Availability via other media
	Njegomir, V. (2018.). *Upravljanje rizicima u osiguranju i reosiguranju*, Tectus, Zagreb.	1	

	Ćurak, M., Jakovčević, D. (2007.). *Osiguranje i rizici*, RRIF plus, Zagreb.	11	
	Ćurak, M., Kovač, D. (2025.-2026.). *Economics of Insurance*, the course materials on Merlin platform.		x
Optional literature (at the time of submission of study programme proposal)	Calvo, R., Yamashiro, A. T., Karnani, M., & Jin, D. (2025). *Insurtech global outlook report 2025 – The insurtech value* [White paper]. NTT DATA. https://insurance.nttdata.com/paper/insurtech-global-outlook-report-2025-the-insurtech-value/ Ćurak, M., Kovač, D. (2020.): Upravljanje rizicima društava za neživotno osiguranje i reosiguranje primjenom tehnike sekuritizacije, *Ekonomski vjesnik*, 33(1), 287.-303. Ćurak, M., Pepur, S., & Kovač, D. (2020). Does financial literacy make the difference in non-life insurance demand among European countries? *Ekonomski pregled, 71*(4), 359–381. Dionne, G. (Ed.). (2025). *Handbook of insurance* (3rd ed., Vol. 1). Springer. EIOPA (2024). Report on Digitalisation of the European Insurance Sector, EIOPA-BoS-24/139. EIOPA (2025). Generative AI Market Survey: Outlook, Use Cases and Risk Management, EIOPA. Gründl, H., Dong, M. I., Gal, J. (2016.). The evolution of insurer portfolio investment strategies for long-term investing, *OECD Journal: Financial Market Trends*, 2016 (1), 1-55. Harrington, S. E., Niehaus, G. R. (2004.) *Risk Management and Insurance*, McGraw-Hill. Harrison, G. W., Ng, M. J. (2019). Behavioral insurance and economic theory: A literature review, *Risk Management and Insurance Review, 22*, 133–182. Hodula, M., Janků, J., Časta, M., & Kučera, A. (2023). On the macrofinancial determinants of life and non-life insurance premiums. *The Geneva Papers on Risk and Insurance - Issues and Practice, 48(4)*, 760–798. Koijen, R. S. J., & Yogo, M. (2023). *Financial Economics of Insurance*. Princeton University Press. Kunreuther, H. & Pauly, M. V. (2015). *Behavioral Economics and Insurance: Principles and Solutions*. In Research Handbook on the Economics of Insurance Law, Edward Elgar Publishing, 15-35. Marasović, B., Pivac, S., Kalinić, T. (2019.) *Aktuarska matematika*, Sveučilište u Splitu, Ekonomski fakultet, Split. Mayers, D., Smith, Jr. C. W. (1982). On the Corporate Demand for Insurance, The Journal of Business, 55(2), 281-296. Milinkovich, N., Kamath, S., Catlin, T., Chung, V., Jain, P., & Elias, R. (2025). *The future of AI in the insurance industry* [Report]. McKinsey & Company.		

	https://www.mckinsey.com/industries/financial-services/our-insights/the-future-of-ai-in-the-insurance-industry Outreville, J. F. (2013.): The Relationship Between Insurance and Economic Development: 85 Empirical Papers for a Review of the Literature, *Risk Management and Insurance Review*, 16(1), 71-122. Pitthan, F., & De Witte, K. (2021). Puzzles of insurance demand and its biases: A survey on the role of behavioural biases and financial literacy on insurance demand. *Journal of Behavioral and Experimental Finance*, *30*, 100471. Rejda, G. E., McNamara, M. J., & Rabel, W. H. (2020.). *Principles of risk management and insurance,* 14th ed.. Pearson Education Limited. Richter, A., Ruß, J., Schelling, S. (2019). Insurance customer behavior: Lessons from behavioral economics. *Risk Management and Insurance Review*, *22(2)*, 183-205. Šain, Ž. (2010.): *Aktuarski modeli životnih osiguranja*, I i II dio, Ekonomski fakultet, Sarajevo. Other scientific and professional papers and reports in the field of insurance. Other sources: Croatian Insurance Bureau, http://www.huo.hr/ Croatian Financial Services Supervisory Agency, http://www.hnb.hr/ European Insurance and Occupational Pensions Authority, https://eiopa.europa.eu/ Insurance, http://osiguranje.hr/ Insurance, http://osiguranje.hr/ Insurance Europe, https://www.insuranceeurope.eu/ Official Gazette, https://www.nn.hr/ SwissRe, http://www.swissre.com/
Quality assurance methods that ensure the acquisition of exit competences	• Monitoring the class attendance and execution of other student's obligations (Teacher) • Teaching Supervision (The Vice-Dean for academic and student affairs) • Analysis of the studying performance for all courses of the study program (The Vice-Dean for academic and student affairs) • Student survey on the quality of teachers and teaching for each course of the study program (UNIST, Centre for Quality Improvement) • All learning outcomes of the course are examined by the examination conducted by the course teacher. Periodic examination of the content of the exam is conducted in order to verify the appropriateness of the method of validating the learning outcomes (The Vice-Dean for academic and student affairs).
Other (as the proposer wishes to add)	